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ABSTRACT

Program evaluation enables administrators to determine the merits of existing programs and the need for new ones. It can lead to revision, deletion, or inception of educational programs. This review examines general information on program evaluation, including evaluation design, methodology, and bibliographic materials. Eleven of the documents reviewed are available from the ERIC Document Reproduction Service. A supplementary bibliography lists documents on program evaluation within specific program areas. (Author)

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Program Evaluation

Terry Barraclough

Effective school program evaluation is a dynamic, vital foundation for instructional improvement. Educators undertaking a school evaluation are taking inventory of all phases of the school program. From the evaluation, changes in practice can be instituted or continuation of existing practices can go on with some assurance that a school program of acceptable quality exists. . . .

Evaluation does not imply that something defective exists. Quite the opposite. Evaluation is a form of insurance that good practice will be nurtured and continued. School evaluation makes good schools even better.

"Evaluation Guide . . ." (1969)

Program evaluation enables administrators to watch over the educational process. Evaluation can determine the merits of existing programs and the need for new ones. It can lead to revision, deletion, or inception of educational programs.

The importance of program evaluation to the process of education has engendered a large body of research and speculation. The documents in this review concentrate, for the most part, on methods of program evaluation. A few documents of importance concerning general information and evaluation design are included, as are several bibliographic works. A supplementary bibliography lists documents on program evaluation within specific program areas.

Eleven of the documents reviewed are available from the ERIC Document Reproduction Service. Complete ordering instructions follow the review.

GENERAL INFORMATION

A guide by the University of Kentucky (1964) maintains that conscientious evaluation, including self-evaluation by educators, is essential to program improvement. The guide focuses on program goals and objectives, staff, administration, finance, school plants, and transportation as they relate to evaluation.

The Kentucky study identifies a problem in evaluation design. Some aspects of the program are difficult or impossible to measure. The only alternative to direct measurement is inference:

> We simply assume—without a very sound reason for doing so, except that we have no other alternative—that what is measurable (including much we honestly cannot measure very accurately) is correlated with some important things we do not know how to measure.

Curriculum evaluation involves collecting, processing, and interpreting both objective and subjective data (Stake 1967). The objective data include descriptions of goals, environments, personnel, methods, content, and outcomes. Subjective data are personal judgments by the evaluator.

Stake cites the need for new techniques of observation and judgment with greater attention to diagnostic testing, task analysis, and goal evaluation. He believes that behavioral science techniques should be utilized in curriculum evaluation.

EVALUATION DESIGN

Nivette (1969) cites three requirements of educational objectives. First, objectives should describe what the student does. Second, they should describe conditions under which the student's performance can be observed. Third, objectives should describe the standards the student must meet.

> . . . communication and interaction with key decision-makers is a cornerstone on which effective evaluation rests.
>
> *Randall (1969)*

The definition of educational objectives in behavioral terms is the first step in Nivette's evaluation design. The objectives must then be translated into descriptions of behavior, and the evaluator must identify situations in which the designated behavior can be observed. An interpretive device to measure desired growth is the next requirement of an evaluation design. Finally, the evaluator must state his conclusions regarding the extent to which the objectives are achieved.

Nivette also includes in his study alternative methods for designing evaluation procedures, five evaluative designs, and a discussion of the use of statistics in evaluation design.

A booklet by the Educational Innovators Press (1970) defines performance and process objectives and provides a set of procedures for developing and writing each. Both types of objectives contribute to the integration of accountability into evaluation of an educational program.

Unless both norm- and criterion-referenced measures are used, realistic evaluations cannot be made (Klein 1972). Norm-referenced measures compare performance to a norm or average, criterion-referenced measures to a predetermined criterion. Klein regards the essential difference between the two types of measures as a question of interpretation, not measurement. He cites the need for both norm- and criterion-referenced interpretation in identifying program components needing improvement and students needing special attention,

in providing the basis for accountability systems, and in determining whether a program is being implemented as planned.

An evaluation guide in the *North Central Association Quarterly* ("Evaluation Guide . . ." 1969) characterizes evaluation as a foundation for educational change. The authors describe preparation, evaluation, and follow-up procedures used by members of the association and note the ongoing nature of evaluation:

> Evaluation is a continuous process. As each decision is made in the school about students, teachers, content, or services offered, some evaluation is made concerning past performance and future need.

Three types of evaluation criteria are identified in the guide. Predictive criteria are quantitative measures such as teacher preparation details, number of volumes in the library, and length of class period or school day. Product criteria are behavioral changes in pupils. Process criteria involve occurrences during the teaching process or elsewhere in the school experience.

EVALUATION MODELS

According to Borg (1971), three evaluation models can be used to assess educational products and processes. In the *unvalidated form of experience* model, the evaluator hypothesizes that certain specific pupil behaviors will create changes in other pupil behavior. He then develops a product or process designed to cause the behaviors, collects observational data, and makes an inferential leap to conclude success or failure of the product or process.

The *validated form of experience* model adds related research evidence to the hypothesis but is otherwise identical to the first model. The *direct performance evaluation* model compares the performance of children exposed to the product or process to the performance of a control group. The nature of the problem, available funds, constraints such as time, and the consequences of mistakes in judgment will determine the particular evaluation model best suited to a program.

The EPIC Evaluation Center (n.d.) defines objective evaluation of school programs as a process in which a school staff collects information to determine whether a given set of objectives has been met. The Evaluative Programs for Innovative Curriculums (EPIC) scheme distinguishes and defines three types of variables: instructional, institutional, and behavioral.

The first step in the EPIC evaluation plan involves identification of variables, composition of behavioral objectives, and development of the evaluative design. The second step is program description and data gathering. Data analysis follows. The final step is the decision-making recycling process. To illustrate its application, the entire EPIC procedure is applied to a specific program.

A paper by Hartwig (1971) presents a deliberately simplified evaluation model. The five steps involved are identification of need, statement of desired outcomes, development of a program, ongoing evaluation, and terminal evaluation.

Randall (1969) describes the Stufflebeam-Guba context, input, process, and product (CIPP) model for evaluation of educational innovations. He sees evaluation as a combination of effective decisions based on timely, relevant information. Problems in evaluation include identifying decisions and decision-makers, timing decisions, identifying relevant information, and reporting information in a useful form.

Randall identifies four classes of evaluation:

> *Context evaluation* deals with the setting of priorities and the selection of strategies.
>
> *Design evaluation* entails specification of objectives and selection of the means to attain those objectives.
>
> *Process evaluation* assesses the possible need to restructure the program after the results of pilot testing and previous evaluations are in.
>
> *Product evaluation* determines the effectiveness of the program in attaining its overall goals.

Roth (1971) maintains that information obtained from program evaluations is usually subjective, vague, imprecise, and outdated. His five-step *program monitoring system* stresses immediacy of feedback and constant monitoring. The first step is statement of goals in specific, measurable terms. Next is the determination of valid behavioral characteristics indicative of goal achievement. Third, data are obtained at established intervals and, fourth, collected and organized at a central source. Finally, the program directors must review results regularly.

The Independent Accomplishment Audit (IAA) measures student performance as a result of financial outlays (Lessinger 1970). The *pre-audit* stage includes determination of objectives and establishment of priorities. *Translation* involves the clear formulation of acceptable evidence. In the *instrumentation* phase, instruments are determined and techniques established. The *review calendar* determines timing. The auditor then carries out the *audit* and makes the results part of the *public record.*

Fogel (1971) applies the techniques of systems analysis to program evaluation. The evaluator should determine the stated program goal and measure approximation to that goal. Then he must identify elements of the program that might reduce the discrepancy between the stated goal and actual achievement. Elements outside the program can also have an effect on goal achievement, and these elements should be isolated. Individual processes and their goals must be identified and analyzed and any additional variables determined. From this systems analysis, the evaluator should gain a fairly complete understanding of the program and a good idea of the weaknesses warranting further study.

A handbook by Glassner (1969) provides an orientation to the *discrepancy evaluation model.* This model posits that the continuous reporting of observed differences between the program staff's expectations for a program and field reality will lead decision-makers to effect desirable changes.

The first stage of the discrepancy evaluation model stresses coordination of the evaluator and the program staff in planning, generating, and amending the program evaluation design. The second stage compares the design to actual operation of the evaluation.

Rippey (1972) argues for cooperation of both protagonists and antagonists of change on a change-oriented team. His transactional evaluation model concentrates on the effects of change on those bringing about the change.

BIBLIOGRAPHIC MATERIALS

Eidell and Klebe (1968) compiled an annotated bibliography of sixty-four documents on program evaluation. The documents emphasize methods, procedures, and

models, and deal specifically with the evaluation of subject programs, state and federal programs, curriculum planning, and innovation. Some entries treat the development and use of mathematical models and cost-benefit analysis.

A bibliography compiled by Kidder (1971) includes twenty-eight abstracts of documents on program evaluation. The entries focus on evaluation methods and on the contributions of programs to student development.

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RESEARCH HIGHLIGHTS

Effective school program evaluation is a dynamic, vital foundation for instructional improvement. *"Evaluation Guide. . ." (1969)*

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